

WHAT IS CLAIMED IS:

1. A method of end-labeling a ribonucleic acid, said method comprising:
covalently attaching with a prokaryotic enzyme at least one non-radioactively
5 labeled ribonucleotide to the 3' end of said ribonucleic acid;
whereby said ribonucleic acid is end-labeled.
2. The method according to Claim 1, wherein said covalently attaching comprises
contacting said ribonucleic acid with said non-radioactively labeled ribonucleotide in
10 the presence of a prokaryotic poly(A) polymerase under conditions sufficient for said
polymerase to covalently attach said non-radioactively labeled ribonucleotide to said 3'
end of said ribonucleic acid.
3. The method according to Claim 2, wherein said prokaryotic poly(A)
15 polymerase is a bacterial poly(A) polymerase.
4. The method according to Claim 2, wherein said non-radioactively labeled
ribonucleotide is a non-radioactively labeled ATP analog, CTP analog, UTP analog or
GTP analog.
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5. The method according to Claim 1, wherein said non-radioactively labeled
ribonucleotide is fluorescently labeled.
6. A method of fluorescently end-labeling a ribonucleic acid, said method
25 comprising:
contacting said ribonucleic acid with fluorescently labeled ribonucleotide
analog in the presence of a bacterial poly(A) polymerase under conditions sufficient
for said polymerase to covalently attach at least one fluorescently labeled
ribonucleotide analog to the 3' end of said ribonucleic acid;
30 whereby said ribonucleic acid is fluorescently end-labeled.

7. The method according to Claim 6, wherein said fluorescently labeled ribonucleotide analog comprises a fluorophore having at least two fused rings.
8. The method according to Claim 6, wherein said non-radioactively labeled
5 ribonucleotide is a non-radioactively labeled ATP analog, CTP analog, UTP analog or GTP analog.
9. The method according to Claim 6, wherein said fluorophore has a molecular weight ranging from about 200 to 2000 daltons.
10. The method according to Claim 6, wherein said fluorophore is a xanthenic compound or a polymethine compound.
11. A method of fluorescently end-labeling a ribonucleic acid, said method
15 comprising:
contacting said ribonucleic acid with fluorescently labeled ribonucleotide analog in the presence of a bacterial poly(A) polymerase under conditions sufficient for said polymerase to covalently attach at least one fluorescently labeled ribonucleotide analog to the 3' end of said ribonucleic acid, wherein said
20 ribonucleotide analog comprises a fluorophore, wherein said fluorophore is a xanthenic compound or a polymethine compound having at least two fused rings;
whereby said ribonucleic acid is fluorescently end-labeled.
12. The method according to Claim 11, wherein said fluorophore is a polymethine
25 compound.
13. The method according to Claim 12, wherein said polymethine compound is a cyanine compound.
14. An end-labeled ribonucleic acid comprising at least one non-radioactively
30 labeled ribonucleotide at its 3' end.

15. The end-labeled ribonucleic acid according to Claim 14, wherein said non-radioactively labeled ribonucleotide comprises an adenine moiety.

16. The end-labeled ribonucleic acid according to Claim 15, wherein said non-radioactively labeled ribonucleotide is fluorescently labeled.

17. A kit for use in end-labeling ribonucleic acids with non-radioactively labeled ribonucleotides, said kit comprising:

a non-radioactively labeled ribonucleotide; and

a prokaryotic poly(A) polymerase.

18. The kit according to Claim 17, wherein said non-radioactively labeled ribonucleotide is a non-radioactively labeled ATP analog, CTP analog, UTP analog or GTP analog.

19. The kit according to Claim 17, wherein said non-radioactively labeled ribonucleotide is fluorescently labeled.

20. The kit according to Claim 17, wherein said prokaryotic poly(A) polymerase is a bacterial polymerase.

21. A method for detecting the presence of a ribonucleic acid target in a sample of a plurality of different ribonucleic acids, said method comprising:

end-labeling said ribonucleic acids of said plurality by the method of Claim 1 to produce an end-labeled plurality of different ribonucleic acids;

contacting said plurality of different ribonucleic acids with a nucleic acid probe specific for said ribonucleic acid target under hybridizing conditions; and

determining the presence of hybridization complexes between said nucleic acid probe and said ribonucleic acid target.

22. The method according to Claim 21, wherein said nucleic acid probe is stably



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